



High temperatures and health outcomes: A review of the literature

Author(s): Martiello MA, Giacchi MV
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Abstract:

AIMS: To analyse the relationship between high temperatures and population health impacts, in terms of mortality and morbidity. **METHODS:** A literature search was conducted using Medline to collect data from studies on heat waves, temperature-health impacts curve, risk factors, and preventive measures. All the data collected was published in English and available up to December 2009. **RESULTS:** Numerous studies carried out in Europe following the 2003 heat wave, as well as those conducted prior to this date in Europe and North America, showed an increase in heat wave-related excess mortality. Recent studies have demonstrated that a forward shift of deaths may only explain a very limited quantity of the excess mortality observed (up to 15%) during major heat waves. Moreover, the results seem to exclude that ozone acts as a confounding variable, whilst it remains a potential effect modifier. **CONCLUSIONS:** Future research needs to explore the consistency of results in new settings, to quantify the burden of heat-related morbidity and in particular to evaluate the effectiveness of the implemented preventive measures.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature

Air Pollution: Ozone

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States, United States

Non-United States: Asia, Australasia, Europe, Central/South America

Climate Change and Human Health Literature Portal

Asian Region/Country: India, Other Asian Country

Other Asian Country: Russia; Korea; Lebanon

European Region/Country: European Country

Other European Country : Italy; Greece; France; Spain; United Kingdom; Portugal; Netherlands; Germany; Czech Republic; Switzerland; Finland; Sweden

Health Impact: 

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Racial/Ethnic Subgroup

Other Racial/Ethnic Subgroup: African American

Other Vulnerable Population: women; people with pre-existing disease

Resource Type: 

format or standard characteristic of resource

Review

Timescale: 

time period studied

Time Scale Unspecified